

Serial No.: 10/610,499
Confirmation No.: 5391
Applicants: BRADBURY, Andrew J. *et al.*
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IN THE CLAIMS:

- 1 (Withdrawn). A wellbore fluid comprising an oleaginous phase and an additive for increasing the density of the wellbore fluid, wherein the additive comprises solid colloidal particles coated with a dispersant.
- 2 (Withdrawn). The wellbore fluid of claim 1, wherein the colloidal particles are composed of a material of specific gravity of at least 2.68.
- 3 (Withdrawn). The wellbore fluid of claim 1, wherein the colloidal particles have a D_{50} of less than 2.0 μm diameter.
- 4 (Withdrawn). The wellbore fluid of claim 1, wherein the composition of the colloidal particles is selected from the group consisting of barite, calcium carbonate, dolomite, ilmenite, hematite or other iron ores, olivine, siderite, strontium sulfate and mixtures thereof.
- 5 (Withdrawn). The wellbore fluid of claim 1 wherein the dispersant is selected from carboxylic acids of molecular weight of at least 150.
- 6 (Withdrawn). The wellbore fluid of claim 5 wherein the dispersant is selected from the group consisting of: oleic acid, polybasic fatty acids, alkylbenzene sulfonic acids, alkane sulfonic acids, linear alpha-olefin sulfonic acid or the alkaline earth metal salts of any of the above acids, and phospholipids and mixtures thereof.
- 7 (Withdrawn). The wellbore fluid of claim 1 wherein the dispersant is a polymeric acrylate ester.
- 8 (Withdrawn). The wellbore fluid of claim 7 wherein the polymeric acrylate ester is made from the monomers stearyl methacrylate, butylacrylate and acrylic acid.
- 9 (Withdrawn). The wellbore fluid of claim 7 wherein the polymeric acrylate ester has an average, molecular weight between about 10,000 Daltons and 200,000 Daltons.
- 10 (Withdrawn). The wellbore fluid of claim 7 wherein the polymeric acrylate ester has an average molecular weight between about 17,000 Daltons and 30,000 Daltons.

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11 (Currently amended). A method of making an additive for increasing the density of a fluid, the method comprising: comminuting a solid material and a dispersant in a liquid medium, so as to produce solid colloidal particles coated with the dispersant, wherein the liquid medium is an oleaginous fluid.

12 (Canceled). The method of claim 11 wherein the liquid medium is an oleaginous fluid.

13 (Original). The method of claim 11 wherein the liquid medium is an oleaginous liquid of kinematic viscosity less than 10 centistokes (10 m²/s) at 40° C. and of flash point of greater than 60° C.

14 (Currently amended). The method of claim 12 wherein the oleaginous fluid selected from the group consisting of diesel oil, mineral or white oils, n-alkanes ~~or~~ and synthetic oils ~~such as alpha-olefins oils, ester oils or poly(alpha-olefins)~~.

15 (Original). The method of claim 12 wherein the dispersant is selected from carboxylic acids of molecular weight of at least 150.

16 (Original). The method of claim 12 wherein the dispersant is selected among oleic acid, polybasic fatty acids, alkylbenzene sulfonic acids, alkane sulfonic acids, linear alpha-olefin sulfonic acid or the alkaline earth metal salts of any of the above acids, and phospholipids.

17 (Original). The method of claim 12 wherein the dispersant is a polymeric acrylate ester.

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18 (Original). The method of claim 17 wherein the polymeric acrylate ester is made from the monomers stearyl methacrylate, butylacrylate and acrylic acid.

19 (Canceled). The method of claim 17 wherein the polymeric acrylate ester has an average molecular weight between about 10,000 Daltons and 200,000 Daltons.

20 (Canceled). The method of claim 17 wherein the polymeric acrylate ester has an average molecular weight between about 17,000 Daltons and 30,000 Daltons.

21 (Original). The method of claim 11 wherein the comminuting of a solid material and a dispersant in a liquid medium is carried out in an agitated fluidized bed of a particulate grinding material.

22 (Original). The method of claim 11 wherein the solid material is selected from the group consisting of barite, calcium carbonate, dolomite, ilmenite, hematite or other iron ores, olivine, siderite, strontium sulfate and mixtures thereof.

23. (New) The method of claim 14, wherein the oleaginous fluid is a synthetic oil.

24. (New) The method of claim 23, wherein the synthetic oil is selected from the group consisting of alpha-olefins oils, ester oils and poly(alpha-olefins).